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AUTHOR Larson, Robert
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ABSTRACT

Focusing on investigating processes of curricular and instructional change for the period 1976-82, the study examined change processes in 2 medium size (400-500 students) Vermont rural high schools not known for being innovative. The research framework was constructed around the change process model and accompanying subprocesses of mobilization, implementation, and institutionalization. Six weeks were spent in each school. Initial exploratory interviews were conducted with the professional staff. Questionnaires were distributed to subsets of that population according to their involvement with identified innovations. Relevant documents were analyzed, but observation was informal. Major instrumentation was drawn from Gene Hall's Concerns Based Adoption Model. The findings revealed that change occurred mainly within the framework of the subprocesses of mobilization, implementation, and institutionalization, and was usually a dynamic rather than linear process. These subprocesses became apparent through the identification of six types of voluntary innovations and two types of imposed innovations. The 80 voluntary innovations were primarily teacher adopted or developed with underlying stimuli primarily idiosyncratic and rooted in factors associated with motivating and relating to students. The principals played key supportive, facilitative and directive roles with both types of innovations and had a major effect on change through the organizational climates they helped to create and sustain. (Author/NQA)

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A STUDY OF CURRICULAR AND INSTRUCTIONAL CHANGE PROCESSES IN RURAL HIGH SCHOOLS[1, 2, 3]

Robert Larson

College of Education and Social Services
The University of Vermont

Presented at the Annual Meeting of the
American Education Research Association
Montreal, April, 1983

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ABSTRACT

"A Study of Processes of Curricular
and Instructional Change in Rural High Schools"

Robert Larson
Associate Professor
College of Education & Social Services
228 Waterman Building
The University of Vermont
Burlington, Vermont 05405

(802) 656-2030

The literature on educational change over the past two decades has been grounded in the procedure of first identifying some innovation that had been adopted or developed by a school or district (usually a reputed innovative organization), and then examining change processes with the innovation as the vehicle for analysis. The orientation of this project was to study change by first identifying the organizations (in this instance two rural high schools not known for being innovative), and to then examine change processes for the period 1976-81 through whatever innovations were identified by the research. Major instrumentation was drawn from Gene Hall's Concerns Based Adoption Model.

The findings revealed that change occurred mainly within the framework of the subprocesses of mobilization, implementation, and institutionalization, and was usually a dynamic rather than linear process. These subprocesses became apparent through the identification of six types of voluntary innovations and two types of imposed innovations. The 80 voluntary innovations were primarily teacher adopted or developed with underlying stimuli primarily idiosyncratic and rooted in factors associated with motivating and relating to students. The principals played key supportive, facilitative and directive roles with both types of innovations, and had a major effect on change through the organizational climates they helped to create and sustain.

A STUDY OF CURRICULAR AND INSTRUCTIONAL CHANGE PROCESSES IN RURAL HIGH SCHOOLS[1, 2, 3]

Robert Larson
College of Education and Social Services
The University of Vermont

"If it ain't broke, don't fix it" is a slogan often associated with rural America. To what degree is this the stance toward change assumed by the schools in rural settings? By what processes does change occur in those schools? This paper describes the major findings from research on change processes conducted in the fall of 1981 in two Vermont high schools.

Background

The literature on educational change over the past two decades tends to fall into the domains of either studying the phenomena associated with the adoption, adaptation, or development of a particular innovation (e.g., PSSC physics, team teaching, computer assisted instruction) (see, for example, Berman, 1975-78; Hall & Loucks, 1977,78; Miles, 1964; Gross, Giaquinta, & Berstein, 1971; Smith & Keith, 1971; Wolcott, 1978) or the process of change itself (see, for example, Culver & Hoban, 1973; Watson, 1967; Herriott & Gross, 1979). Whatever the orientation, these studies have been grounded in the procedure of first identifying some innovation(s) and then examining change through the vehicle of the innovation(s).

The focus of this research project was to examine processes of change in two medium size (400-500 students) rural high schools by selecting the schools first. The schools were picked because they were representative of some 20 other high

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[1]Presented at the Annual Meeting of the American Educational Research Association, Montreal, April, 1983.

[2]The research described herein was supported partially by an Institutional Grant from the University Committee on Research and Scholarship of the Graduate College of the University of Vermont.

[3]Appreciation is expressed to the administrators and faculties of the high schools used as study sites. Without their cooperation and assistance, this research could not have been conducted.

schools like them in the state, they are a common size high school in rural sections of many states, and they were in rural settings based on demographic and geographic criteria (e.g., income levels, % of the population employed in agriculture and related fields, distance from urban areas). Other than the presence of two imposed innovations, the researcher did not become aware of other innovations until after the study began.

Ten Above

This school, built in 1958 and located in central Vermont, 1½ hours from the state university and the state's largest city, was comprised of 517 students, grades 9-12. Out of 121 graduates in June 1981, 48 went on to some form of higher education. 1981 mean SAT scores for seniors were 463V and 461Q as contrasted to national averages of 424V and 466Q. The current drop out rate was 4.5% and daily absenteeism, 7.0%. Per pupil costs were $2083 (as measured by allowable tuition*) as contrasted to a state average of $2043 for a school of this size. Starting salary with a BA was $10,760; the top of the scale with an M.Ed. was $18,635. Thirty six teachers were employed at Ten Above: 19 male, 17 female; 12 had a BA or BS, 24 a master's; 21 were in the 30-39 age bracket; 1 had taught for less than 4 years. The principal, a male in his 40s had been in his position since 1975.

Ten Below

This school, built in 1970 and located in northern Vermont, 1½ hours from the university, was comprised of 407 students, grades 7-12. Out of 58 graduates in June, 1981, 21 went on to some form of higher education. 1981 mean SAT scores for seniors were 407V and 438Q. The current drop out rate was 3.0% and daily absenteeism 7.0%. Per pupil costs (as measured by allowable tuition) were $2010 as contrasted to a state average of $1995 for a school this size. Starting salary

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*Some educators argue that this figure is a more accurate measure of local support for education because it factors in capital expenditures and transportation costs.

with a BA was $9550; the top of the scale with an M.Ed. was $17,458. Thirty one teachers were employed at Ten Below: 19 male, 12 female; 18 had a BA or BS, 13 a master's; 19 were in the 30-39 age bracket; 3 had taught for less than 4 years. The principal, a male in his 30s, had been in his position since 1974.

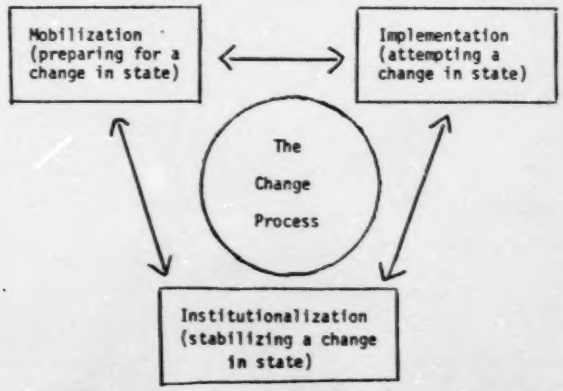
The Research Framework

The focus of the project was on investigating processes of curricular and instructional change within the last five years in each school. Five years was selected so that two known "imposed" innovations, Vermont Basic Competencies regulations and PL 94-142 staffings would be included. Innovation (after Hall & Loucks, 1981) was defined as any new process, product, or program that required the user to change his/her behavior. It is a more deliberate act than the notion of change, and is a "species of the genus change" (Miles, 1964:14) herein defined as "To alter by substituting something else for, or by giving up for something else; to put or take another or others in place of. To make different; to connect." (Webster). Innovations were the vehicle through which to study change.

The research framework was constructed around the change process model and accompanying subprocesses of mobilization, implementation, and institutionalization as conceptualized by Berman (in Lehming & Kane, 1981:264-274) and which had emerged out of the Rand studies of Federal Programs Supporting Educational Change (Berman & McLaughlin, 1978). As the authors point out, the model is intended to convey that

Figure 1

The Research Framework


Mobilization (preparing for a change in state)
Implementation (attempting a change in state)
The Change Process
Institutionalization (stabilizing a change in state)

change is not usually a linear process moving from discrete stage to discrete stage; rather it is a highly complex, interactive one. This model fits quite well with the "organized anarchy", "garbage can", and "loosely coupled" concepts seen more and more in the literature about schools (Clark & McKibbin, 1982; Weick, 1982). Other main concepts for the study were drawn from components of the Concerns Based Adoption Model developed by Hall and his colleagues at the University of Texas (Loucks, Newlove, & Hall, 1975; Hall, George, & Rutherford, 1979; Heck, Stiegelbauer, Hall, & Loucks, 1981).

The principal research questions, then, which guided the specific operational questions (not included in this paper), were:

1. How does a rural secondary school mobilize for change?
2. How does a change get implemented?
3. How does a change get institutionalized?

Six weeks were spent in each school. Initial exploratory interviews were conducted with the total professional population with selected interviews conducted with and questionnaires distributed to subsets of that population according to the set's involvement with identified innovations (see Table 1). Relevant documents were analyzed but observation was informal.

Time constraints led the author to focus on innovations that were within the rubric of curriculum and instruction. Administrative innovations (e.g., of a budgeting or a scheduling nature) were not included in the study. This is a research limitation because managerial innovations can clearly have a stimulating, supporting, or impeding effect on things curricular or instructional. However, during the interviews informants did not point out managerial innovations that were affecting the latter.

One caveat. This is not a comparative study. Therefore, depending on what seems to be the most useful way to display data, findings are sometimes integrated for both schools and sometimes portrayed separately.

Table 1

The Data Base

	Ten Above 9/12 - 10/16	Ten Below 10/19 - 12/9
Average No. of Exploratory Interviews* per Person	98 interviews / Total N = 41 = 2.4	94 interviews / Total N = 37 = 2.5
Levels of Use Interviews*	N = 29	N = 24
Work Attitudes Interviews*	N = 18	N = 24
Total Interviews	146	145
Stages of Concern Questionnaire	N = 62	N = 49
Work Attitudes Questionnaire	N = 33	N = 28
Board Minutes 75-81	examined	examined
Program of Studies and Related Materials	examined	examined

* Interviews @ 40 minutes each.

Mobilization

"Preparing for a Change in State"

In this section our interest is focused on how change begins, the phase of the process we know least about (Fullan, 1982:15). The findings emerged primarily from the initial exploratory interviews (for an average of 100 minutes each) with the total professional staff in each school. These interviews were aimed at topics like identifying the innovations, the stimuli for them, the processes by which they became implemented, who played what roles in the processes, and what innovations had been dropped within the last five years.

Two broad categories of curricular and instructional change are discussed, voluntary and imposed (after Fullan, 1982:25). The former are those chosen, invented, or adopted by the organization and the latter are those imposed on it.

Voluntary Change

The exploratory interviews revealed the existence of several types of innovations. To operationalize these types further, they have been placed into a crude typology, the definitions being far from discrete. However, they do make the notion of innovation more specific and avoid the tendency in the literature to treat it as a homogeneous category (Daft & Becker, 1978:120). Not included in the list are Vermont Basic Competencies and the staffings associated with PL 94-142 which emerged as the major mandated changes in each organization since 1975.

Table 2

A Typology of Voluntary Innovations

Course -	a body of organized knowledge taught on a semester or year basis (e.g., Vermont Ecology, Data Processing)	N = 14	N = 14
Unit -	a segment of a course (e.g., 4 weeks on mfg. in metals, 2 weeks on map skills in geography)	N = 8	N = 9
Theme -	a topic of discourse or discussion (e.g., consumerism in Home Econ., sex equity in U.S. History)	N = 7	N = 8
Methods & Materials -	means of instruction and the implements for its delivery (e.g., games & simulations in French, new text in Basic English)	N = 5	N = 3
Technology -	a technological device for aiding the learning process (e.g., microcomputer in math, memory typewriter in Business Education).	N = 2	N = 4
Structure -	work patterns or working relationships of organization members (e.g., double period for transcription, open classroom area for math)	N = 3	N = 3
TOTAL		39	41

Observations

1. The innovations are not arrayed in any order according to attributes and consequent effect on the organization, a much needed next step. For example, a

new course or technological innovation like the microcomputer is quite different from a unit or theme type in terms of attributes such as financial cost, complexity, and organizational impact (for the best discussion in the literature relative to innovation attributes, see Zaltman, Duncan & Holcek, 1973:31-47).

2. The innovations were primarily individualistic (linked to a teacher rather than a group) and could be seen as relatively "simple" in nature on criteria such as inherent complexity and difficulty of use (Fullan, 1982:59).

3. The predominant type listed are curricular rather than instructional. Could this be because teachers, the primary data sources, had trouble recalling innovations that tended to be more process like than product? The principals contend thus, pointing out that in retrospect a more exhausive list of innovations should include the numerous changes in teaching methods, styles, or educational perspectives that they know of. However, during the interviews with principals such innovations did not surface either. Whatever the reasons for the perceived omissions, these kinds of "micro" level changes should not be treated lightly because enough of them in combination could have an important effect on the organization. As Hall (1977:6) points out, the question, "Is It in use?" has even more direct and profound implications for research than does the question, "What is It?"

Also not to be slighted is the issue of principal tenure. Given their commitments to school improvement and their efforts to effect it, over a number of years, through relatively simple innovations, they could move a considerable distance toward this goal.

4. Given that the number of innovations identified may be far from accurate, ought there to be some "reasonable" number of them in schools like Ten Above and Ten Below over a five-year period? Where do we start from as an "innovation baseline"? As we shall see the subprocess of mobilization appears to be on-going, cyclical, and nonlinear and innovations adopted or developed are very much linked

to the contexts of change in the larger society, the community, and the organization.

5. Other than budget approval for an innovation that required special support, courses were the only type requiring consistent formal system support from the principal, superintendent, and board. This despite the fact that some innocuous appearing innovations such as a theme of sex equity in social studies or life's origins in biology, had the potential, if not taught responsibly, to have considerable disruptive outcomes. A high degree of trust between educators and the boards (in this case) existed at Ten Above and Ten Below. Without it a hierarchical damper would impede the voluntary innovations because virtually every staff act would require system approval.

6. Many of the innovations link with each other in a coherent pattern which Table 2 cannot portray. Space prohibits a detailed description of such instances but two examples would be several new courses (or revisions) in English and Social Studies in each school.

7. The typology raises a question in terms of functions served by the innovations. Could it be that some innovations were considered and rejected by innovators because they were not needed at this point in time? Or conversely, might the absence of "packaged" innovations such as career education materials or more large scale innovations such as team teaching, be due to lack of resources to write grants or funds to install them and resources to support them, or a general reluctance to get involved with outside bureaucracies that control funds and monitor program progress? As Daft and Becker point out, more research is needed in this area (1978:129).

Stimuli for and Sources of Change

Table 3 depicts the stimuli for the 80 innovations listed in Table 2. There was no pattern to certain types of stimuli being attached to certain types of innovations, so the stimuli are listed by frequency.

Table 3

Stimuli for Change

Student interest or dissatisfaction (e.g., students not electing elective courses, failing grades, or "acting up" out of boredom)	21
Teacher ego, interest, or experience (e.g., the poor image of a course, special affinity for a pet subject, new information from a graduate course)	13
Laws, regulations, and accreditation visits (e.g., Title IX, PL 94-142, accreditation team suggesting a new course)	10
Teacher observation (e.g., kids needing first aid instruction because of hunting, seeing that kids needed sex education information as it wasn't available through a community agency)	7
Teacher dissatisfaction (e.g., "I had to do something with this material. It was driving me crazy.")	6
Journals and newsletters (e.g., a death & dying unit from the English Journal)	5
Administrative direction (this category, although low in #'s, is not an accurate portrait of the principals' roles. It encompasses several changes through principal direction such as a "bundle" of course innovations in a department.*	4
School structure (e.g., a new study hall structure that affected "time on task", an open area that facilitated teaming in math)	4
Budget (addition or cuts) (e.g., a model office from state and federal voc. ed. $, creating a new course out of two courses due to RIFing)	3
Culture change (e.g., carry over activities in PE to meet leisure time needs)	3
The local public (e.g., parental complaints about #'s of failures in a govt. course.)	3
Peers (e.g., using the local paper as an outlet for work of a journalism class)	1
TOTAL	80

*More than one innovation occurring at or around the same time (Hall & Loucks, 1981:55).

Table 4 depicts the sources of the ideas for the innovations. In other words, although an innovation was stimulated there was usually a need to find a way to respond to it in the form of an idea that could be put in practice. As with the stimuli, there was no pattern to sources being connected to certain types of innovations. Also, there are fewer sources listed (72) than there are changes because there were instances where the stimulus provided the idea (e.g. a first aid unit into a PE course).

Table 4

Sources of Ideas

Journals and newsletters	21
Peer discussions	13
College courses	12
Regional and state conferences	6
Faculty at other schools	4
TV	4
Other (librarian, principal, new texts, teacher center, dept. meetings. salespeople, test results)	12
TOTAL	72

Observations

1. In these schools, the stimuli for change had a distinct "inner directedness" to them (i.e., from teachers, students, administrators, etc.). Other than laws, regulations, and accreditation visit input, these schools were not subject to significant public pressure to change. In fact, a problem in these settings was to obtain a more accurate picture as to how laypeople saw the organization and what they expected of it. At the same time, no teacher or administrator identified changes they wished to see but were hesitant to implement for fear of disturbing the local community (e.g., each school had an elective sex education co[illegible]

neither school had encountered a library censorship issue). In other words, at this point in time, Ten Above and Ten Below were not faced with vulnerability problems (i.e., subjected to pressures that are incompatible with one's goals without the capacity to resist) that urged on the organizations innovations they did not wish to develop or adopt (Sieber in Eidell & Kitchel, 1967:122-127). As one of the principals put it,

> One thing I like about a rural school is that I'm in charge here. I have my foot on the accelerator. I can channel change more here than in an urban or suburban setting.

Given this picture, one clear message is that educators in these kinds of settings bear a great responsibility for identifying school needs and initiating appropriate improvements.

2. This writer was unable to identify any of the 80 innovations that related consciously and specifically to school philosophy and goals. None of them seemed counter to or incompatible with what "school is all about" but this implicit and "functional fit" was based more on intuition and experience than on a set of pre-existent goals. This finding is consistent with a similar outcome from the Daft & Becker, 1978:177; and Larson, 1982, studies of high schools. The "garbage can" process was much in evidence in these organizations: "Preferences are discovered through action as much as being the basis for action" (March & Olsen, 1979:25). Rationality, relating consequences systematically to objectives (March & Olsen, 1975:70) was not the prevailing mode of behavior; however, organizational behavior at Ten Above and Ten Below was intentional (i.e., having meaning or purpose).

3. Teachers were primarily responsible for mobilizing personal and organizational processes for voluntary innovations. These individuals were competent, veteran teachers (between the schools only two people had taught for less than four years), although their educational level (in contrast to Daft & Becker, 80) was not related to their being more or less inventive or adoptive than their peers. These outcomes support Fullan's (1982:46) contention that under the right condi-

tions, many teachers are willing to change at the classroom level.

4. Changing to alternative curricular content or instructional methods requires knowledge about options. The findings illustrate that at Ten Above and Ten Below the stimuli for innovations were not imbedded in the rationalistic process that is so highlighted in the organizational literature. This outcome is consistent with other research that has examined problem solving behavior in schools (see Berman & McLaughlin, 1978:14, and the Abt studies of the Rural Experimental Schools Program, Rosenblum & Louis, 1981:255-260). Innovation and subsequent change were driven largely by intuition, hypothesizing, and experience, modalities that some writers are advocating as important ways through which to stimulate organizational improvement (March & Olsen, 1979:78-79).

However, to what degree is new information and knowledge critical to mobilization? How should it interface with intuition, hypothesizing, and experiences? As Sieber points out, there is considerable reason to believe that an "enlightened" person through knowledge is more likely to be an innovator (in Lehming & Kane, 1981:148). Yet in these schools the manner in which ideas were garnered (Table 4) was quite haphazard. Given the constraints of geography and finances (to name but two of many) in a rural setting, could means such as the ERIC system, the National Diffusion Network (neither of which were mentioned by anyone in either school as a source of ideas), teleconferencing, TV, and the traditional traveling library be used more effectively to enlighten educators about options to what is? When one considers the reality that a teacher's search for occupational knowledge is retarded by the individualism that characterizes the workplace plus the present rather than future orientation of the job (Lortie, 1975:212) finding ways to inject new ideas into the organization is a task of some import.

Incentives to Change

A common axiom regarding organizations like schools which are concerned with molding people rather than objects, is that the special problems of motivational processes between clients served and those (in this case) educating, require that the latter possess wide discretionary power to act in order to maximize productive interaction (Katz & Kahn, 1978:159). To assess how teachers saw themselves in terms of job discretion they were asked to complete a "Sense of Autonomy" scale which included 24 items relative to feelings about work, scored on a 1 (low) to 6 (high) scale of autonomy (Packard, et. al., 1976:211-251). The results were:

Table 5

Sense of Work Autonomy

		Mean Score
Ten Above	N = 33 (out of possible 41)	4.5
Ten Below	N = 28 (out of possible 37)	4.6

These scores support the pattern of teacher centered stimuli for innovation identified in Table 3. Most teachers acted on the autonomy they had to mobilize for innovation within the broad context of what they perceived as educational needs.

Why, however, did they act? There may be many stimuli impinging on an individual who may feel quite autonomous, but there may be little incentive to change. Drawing on Lortie's classic study of the teaching profession and his instrumentation (1975:248-254), interviews were conducted with a select number of teachers relative to factors that were associated with motivation to change. Two key questions are mentioned here.

"What are the most important tasks you have to do as a teacher?"

"What are the greatest satisfactions you get from teaching?"

Table 6

Most Important Tasks To You As A Teacher

N = 42

- Being a role model for kids, the daily contact with them, meeting their needs	26
- classes themselves	17
- planning and organizing each day	14
- prepare students for the future	4
- discipline and classroom management	4
- develop and update curriculum	4

Table 7

Greatest Satisfactions From Teaching

N = 42

- seeing students do well in school (learn, grow, develop)	31
- working with kids, influencing their lives	18
- times off (primarily for one's mental health)	17
- control of job, variety to the day, prestige of teaching, ambience of the work	15
- peer relations	10
- seeing students do well in later life	9
- feedback from kids	7
- teaching the subject	4

Then, to gain further insight into this domain of attitudes and values, an additional question was asked (after Lortie).

> If you were given a gift for ten extra hours a week for work purposes (and were paid for it), how would you use it? (see Table 8)

Table 8

A Gift of Extra Work Hours
(% of hours selected out of the total hour base)

	Ten Above N=18 180 hours	Ten Below N=24 240 hours
Class Preparation	25	18
Curriculum Development	22	10
Community Relations	.05	.04
More Teaching	10	20
School Management	.06	0
Parent Conferences	.02	.05
Counseling Students	12	28
School Activities	16	13
(Work with peers and prepare use of AV)	.01	.008

Observations

1. For Ten Above and Ten Below teachers, the driving forces for curricular and instructional innovation were rooted primarily in a variety of psychological factors. The data in Tables 6, 7, and 8 for secondary teachers are remarkably similar to what Lortie found in his research on elementary schools. "The structure of teaching rewards, in short, favors emphasis on psychic rewards (1975:103)." Unlike extrinsic (money, prestige, power) and ancillary (work schedules, job security, time off) rewards which do not fluctuate very much and which an individual cannot easily change, with a minimum of effort, task related satisfactions can often be increased (Lortie, 1975:103). Hence, a relatively autonomous teacher can alter numerous dimensions of curriculum and instruction which are within one's control or at least influence, and if the alterations (i.e., innovations) have an impact on one's relationships with students they enhance psychic rewards.

This dynamic among highly autonomous teachers was in operation in these schools. Again to draw on Fullan (1982:46), under the right conditions, most

teachers will be innovative. In these high schools powerful local mobilization incentives were in motion, incentives that Sieber (in Lehming & Kane, 1981:144-166) states are often present in organizations but underutilized for such a purpose. Other research has demonstrated (Katz & Kahn, 1978:418) that intrinsic factors associated with the job itself are important work motivators. What these data are saying, however, is that for most teachers, as the tables indicate, developing and updating curriculum per se was not seen as a highly important task. Some other force must prod innovation in this arena. It may well be, though, that the same conclusion does not hold for instructional change because change in this arena can have more immediate "psychic payoff" for a teacher. Although not articulated as clearly as curricular matters, to this researcher instructional satisfaction was integral to a high percentage of staff statements that led to the categories in Tables 6 and 7.

2. In these schools, one could argue that status quo oriented faculties were not a prime problem. Various stimuli and incentives were present to mobilize change. Rather, a prime problem was to find ways to control and channel change in organizationally desired directions without suppressing individually imbedded motivation to innovate.

3. If psychic rewards are important to the mobilization subprocess, then energy must be channeled in that direction. It cannot be if faculty find large portions of their time diverted to pupil control, discipline, and general managerial issues. At Ten Above and Ten Below the organizational climates had telling effects on innovation. Both schools were well managed, discipline problems were minimal (the researcher rarely heard of a teacher complaint on these scores), and the buildings were relatively free of vandalism. Hence teachers, the prime change agents, were relieved of the maintenance concerns they wished to be free of (see Tables 6, 7, and 8 of this study and Lortie, 1975:168-186), and could focus their attention on the classroom and on curricular and instructional improvement.

4. The principals (At this point it is appropriate to discuss the principals. Certainly just running a well administered building would not in itself have that much of an impact on staff motivation to be innovative.)

Today's educational literature is replete with references to the critical role principals play in building and maintaining an effective school and in aiding or impeding the improvement process. Indeed, as some wits put it, "We have rediscovered the principalship." This stress on a role, although highlighting the importance of leadership, can also result in a warping of expectations so that we begin to think that near miracles will occur if we can just find the "right" administrator. In fact, given the nature of the position with its endless responsibilities and hectic work pace, most of the time "educational leadership happens when it happens at all, within the cracks and around the edges of the job (Miller and Lieberman, 1982:366)". Whether or not such leadership is exerted, however, the research converges on the point that the principal has a significant impact or the implementation and continuation of any innovation (Fullan, 1982:140).

The principals at Ten Above and Ten Below had been in their positions for six and seven years respectively. Both men were active and assertive individuals, were seen consistently out and around the school, were heavily involved with staff and students, and were very concerned about and engaged in curricular and instructional improvement. The Ten Above principal was more of a "facilitator" in style, using a variety of strategies to organize and influence teachers and relying extensively on teachers influencing peers (Fullan, 1982:138-139). He summarized his approach to change thusly:

> What is my role in relation to change? I plant the seed and leave it there and water it from time to time. When it takes place you give away the ownership of it. The only people who may be aware of the change are those involved in the transaction.

The Ten Below principal was more "directive" in style, tending to decide more himself as to what the change ought to be and then working to get faculty to follow

his tentative decisions (Fullan, 1982:138-139). This statement captures his change philosophy."

> The focus at Ten Below is on change as a process and not so much as an event. People here have to come to feel that an idea is theirs before they'll move. Things happen subtlely, in low key ways.

However, although these were overall behavioral tendencies, each alternated much of the time between these styles, depending on the situation.

The following comments by teachers represent how most faculty felt about their principals.

(at Ten Above)

> He's very responsive and accommodating. He understands curriculum and knows what's going on here in detail down to the content of the novels we teach.
>
> I'm very dependent on him being willing to support an idea and advocate for it. Without that backing after awhile you just give up.

(at Ten Below)

> He's on top of the latest trends. He seems to read all the magazines. He challenges us to think about what we're doing. If we as a department don't buy it though, he doesn't force it on us.
>
> He's continually trying to upgrade curriculum. I have the feeling that he's never quite satisfied with what's going on. He wants excellence.

These observations capture other dimensions of the principals' styles, dimensions that served to support and encourage the subprocess of mobilization that led to curricular and instructional innovation.

Imposed Innovations

Two types of innovations were identified that had been imposed on the total organization within the last five years. The first was Vermont Basic Competencies, a regulation passed by the State Board of Education in 1977 that mandated the teaching and testing of basic competencies in Vermont schools in the areas of reading, writing, speaking, listening, mathematics, and reasoning. All students, in order to graduate, were to master them beginning with the class of 1981 (with the exception of reasoning which was effective as of 1983). It was left up to

each school to develop its own system for implementing the competencies, for monitoring student progress, for testing, and for record keeping. The second innovation was PL 94-142 which also became effective in 1977.

The principals of Ten Above and Ten Below took an active role in mobilizing their staffs relative to these coming changes in the system. In each school the innovations met with a less than enthusiastic response from teachers, but there was no outright resistance. Each principal was clear and definitive about what these changes were, the intentions underlying them, that the organization had a responsibility to comply regardless of how people felt about the merits of the regulations and the law, and that compliance would be in good spirit and effectiveness.

Implementation

"Attempting a Change in State"

"Unlike mobilization, the subprocess of implementation has been studied extensively during the past decade" (Berman in Lehming and Kane; 270). Fullan and Pomfret (1977:336), define implementation as the actual use of an innovation; what happens to it and to the people involved with it as it is put into practice. Studies of implementation fall into two primary orientations: (1) fidelity in terms of the degree to which use corresponds to intended or planned use as understood during mobilization; (2) process in terms of the dynamics of the processes at work during implementation (Fullan and Pomfret, 1977:340). This section will address the process orientation.

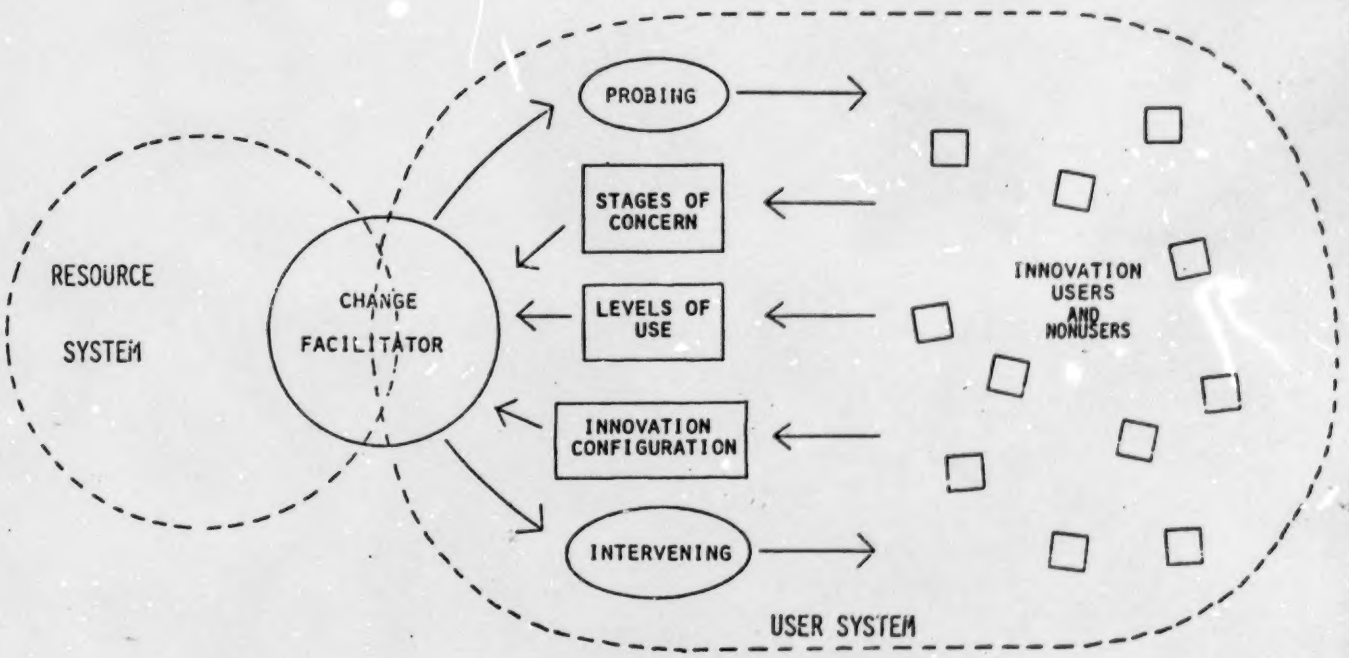
The Concerns Based Adoption Model

Ideally the analysis of implementation of the innovations described in the previous section would rely heavily on observation of them in use. However, time constraints prohibited systematic observation from being conducted. Therefore, in addition to examining relevant documents pertaining to these innovations, this

researcher decided to experiment with an adaptation of the Concerns Based Adoption Model (CBAM) developed at the R&D Center for Teacher Education at the University of Texas at Austin to examine implementation phenomena via instrumentation rather than observation.

FIGURE 2

THE CONCERNS-BASED ADOPTION MODEL



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Underlying the Model are four key assumptions; change

1. is a process and not an event,
2. is made by individuals first, then institutions,
3. is a highly personal experience, and
4. entails developmental growth in feelings and skills (Hall, 1979:2-3).

In the CBAM, the change facilitator is the formal or informal leader (e.g. principal, department chair, etc.) within or outside the organization who assumes an active role in facilitating adoption and in assisting individuals who are using the innovation or considering use to increase their confidence and competence with the innovation. Levels of Use identify the behaviors of people involved with an innovation. Stages of Concern relate to the feelings, perceptions, motivations, and attitudes of people who become aware of an innovation, approach use, and then use it (the process of implementation). Innovation Configurations is a means to measure the degree to which an innovation has been adapted since it was first implemented (the concept of fidelity). Lastly, information about concerns, use, and adaptation can be helpful to the facilitator who may be able to influence the use of the innovation.

The LoU and SoC processes were applied to a number of innovations selected out of the total "innovation pool" at Ten Above and Ten Below. Selection was based on the author's judgment as to the specificity and substance of the innovations in terms of their potential for further examination via CBAM instrumentation. There were limitations in how the instruments were utilized. First, they are constructed to investigate the change process over time, developmental movement if you will. In this project they were applied just once to get a snapshot rather than a movie of individuals at a stage in development. Second, they are constructed to investigate the change process by analyzing innovations adopted or developed by groups of people in the organization, groups large enough to provide a statistically sound N. In this project they were applied to singular innovations (with the exception of the competencies and 94-142). Another limitation applies to the Open Ended Statements of Concern interview. Unlike the LoU interview, it is not a rigorous instrument recommended for application as a research tool, but it has been found helpful in assessing concerns (Newlove & Hall, 1976:2). Because interviews focused on

singular innovations the researcher concluded that this more diagnostic oriented interview was a more productive methodology to rely on as contrasted to the SoC questionnaire.

Levels of Use

A total of 53 "voluntary" and "imposed" innovations in use were examined through the Levels of Use interview, a validated focused interview that enables a researcher to assess the behavior of individuals involved in the use of an innovation (Loucks, Newlove, and Hall, 1975). No attempt was made to select a stratified sample of innovations in each category with the result that in some columns there are Ns of one. With the exception of the competencies, there was basically no comparability in length of use (as built into LoU methodology) because these individually adopted or developed changes had been in effect from a minimum of three months to four years.

Figure 3 depicts the basic concept of LoU. Not included in the schematic are seven categories of key functions associated with use of an innovation (e.g., knowledge about it, sharing information with others, planning). An interviewer can determine an LoU for each category and an overall LoU rating. As with SoC instrumentation, detailed profiles of users can emerge from these interviews that can provide the innovator and change facilitator (e.g., teacher principal, department chair) with rich clinical type data about the change process.

Figure 3

LEVELS OF USE OF THE INNOVATION:

TYPICAL BEHAVIORS

LEVEL OF USE		BEHAVIORAL INDICES OF LEVEL
VI	RENEWAL	THE USER IS SEEKING MORE EFFECTIVE ALTERNATIVES TO THE ESTABLISHED USE OF THE INNOVATION.
V	INTEGRATION	THE USER IS MAKING DELIBERATE EFFORTS TO COORDINATE WITH OTHERS IN USING THE INNOVATION.
IVB	REFINEMENT	THE USER IS MAKING CHANGES TO INCREASE OUTCOMES.
IVA	ROUTINE	THE USER IS MAKING FEW OR NO CHANGES AND HAS AN ESTABLISHED PATTERN OF USE.
III	MECHANICAL USE	THE USER IS USING THE INNOVATION IN A POORLY COORDINATED MANNER AND IS MAKING USER-ORIENTED CHANGES.
II	PREPARATION	THE USER IS PREPARING TO USE THE INNOVATION.
I	ORIENTATION	THE USER IS SEEKING OUT INFORMATION ABOUT THE INNOVATION.
0	NONUSE	NO ACTION IS BEING TAKEN WITH RESPECT TO THE INNOVATION.

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Tables 9 and 10 portray overall Levels of Use at Ten Above and Ten Below.

Table 9

Ten Above
N = 29

OVERALL LEVELS OF USE

TYPES OF VOLUNTARY INNOVATIONS ↓	Level 0 Non Use	Level I Orientation	Level II Preparation	Level III Mechanical	Level IVA Routine	Level IVB Refinement	Level V Integration	Level VI Renewal
COURSE					8	3		
UNIT					2	3		
THEME					2			
METHODS & MATERIALS					4			
IMPOSED INNOVATION ↓ BASIC COMPETENCIES				1	6			

Table 10

Ten Below
N = 24

	Level 0 Non Use	Level I Orientation	Level II Preparation	Level III Mechanical	Level IVA Routine	Level IVB Refinement	Level V Integration	Level VI Renewal
COURSE					2	8		
UNIT					1	3		
THEME					1			
METHODS & MATERIALS						1		
IMPOSED INNOVATION ↓ BASIC COMPETENCIES					8			

Observations

1. The data reveal few "surprises," given the nature of the users and the innovations themselves. Early LoU research demonstrated that after at least 3 cycles of use 30-40 percent of users were found to be at the routine level (Hall, et.al., 1975:7) and more current analyses continue to support that conclusion (Rutherford, 1982). Also, one would expect a user who was an adopter or developer to be at least a Level IVA. It is interesting to observe that all teachers involved with an imposed innovation, in this case the Basic Competencies, were at a "routine" LoU IVA.

2. To stimulate a user to move "up" to the next LoU usually takes some intervention by a change facilitator (someone other than the user him/herself). Although there is voluminous literature on educational change, there is a dearth of material focused specifically on types and processes of intervention (Hall, Zigarmi, Hord, 1979:105).

At Ten Above and Ten Below the principal was the primary person and department chair second when it came to intervening (i.e., "...an action or event or a set

of actions or events that influences use of the innovation", Hall, Zigarmi, Hord, 1979:110) with teachers on matters relating to curriculum and instruction. In each school chairs had part teaching assignments and had no responsibility for supervision and staff evaluation so, in general, were not seen by the principal or themselves as "line" officers with a right and duty to intervene in a peer's affairs. Much of the principals' intervention in innovation matters occurred indirectly through what might appear to be unrelated activities such as budgeting or scheduling, yet in countless subtle ways these activities were used to encourage or discourage teacher behavior that might lead to educational improvement. Here we are discussing the kinds of interventions principals may make with staff on a routine basis that, over time, can come to represent a host of marked or missed opportunities to facilitate change (see Principals as Change Facilitators, 1982).

3. In each school there were illustrations of more systematic intervention with teachers by principals. At Ten Above (as is described in an upcoming section) the principal chaired all PL 94-142 staffings and through these had gained considerable influence over his organization's delivery of services to students eligible for those services under the law. At Ten Below the principal had an evaluation and development session with most teachers every year, dependent on their employment tenure. Through this process he could assess performance with that person, determine any needed areas of improvement, and set appropriate objectives.

Although intervention per se was not a part of this research, the author's assessment is that with an appropriate intervention most staff who were at a routine level of performance had the potential to be moved to refinement, which should lead to some adaptation of the original change so that its impact would be increased. In addition, refinement behavior can be an important source of revitalization and satisfaction for teachers who are in a profession where frustration and alienation are all too prevalent in the workplace (Fullan, 1982:118-119). It would seem that here supervisors have considerable opportunity to be

of assistance to their staff and to have an impact on organizational renewal.

4. Analysis of the staff members who were at Level IVB indicates one general set of reasons as to why they were at a "refinement" rather than "routine" LoU. These teachers were excited by the innovation; they saw it as having a real effect on kids' learning; they felt considerable success with their students; they saw the innovation as having even more potential for having an impact on the school. In sum, these people projected the "sense of efficacy" that comes through in the research as an important factor in successful implementation (Fullan, 1982:72).

5. Although this study did not attempt to dissect each voluntary innovation in terms of innovation characteristics, it does appear that findings from the implementation literature have some explanatory value when analyzing change at Ten Above and Ten Below. This literature concludes that the following four innovation attributes relate to successful implementation: (1) need - teachers (users) perceive the change was needed; (2) clarity - the user is clear as to what the essential features of the change are and what it means in practice; (3) complexity - the degree to which the change can be divided into components, the degree to which it requires cooperation and communication with other organization members; and (4) practicality - the change is seen by users as tangible, relevant, and of utility in a specific situation (Fullan, 1982:57-63).

Given that these were voluntary changes, one would expect, therefore, that these attributes would be associated with what teachers had adopted or developed. These veteran educators had operationalized their own screening process through the application of these innovation characteristics. Overall one could conclude that these were primarily "simple" changes in that they were targeted on single classrooms and hence easier to implement than large-scale organization-wide changes (Fullan, 1982:59) (like the competencies and staffings).

When we consider the strong norms of staff autonomy at Ten Above and Ten Below, the "flat" structure of each school in terms of administrative assistance to the

principal (at Ten Above there was a full-time assistant principal and at Ten Below a part-time), the non-evaluation roles played by department chairs, the "loosely coupled" structure of schools like these (e.g., classrooms can operate relatively independent of each other, it is difficult to track the impact of classroom level decisions on the rest of the organization, spans of control are large) Weick, 1982; Willower, 1982), and the lack of central office personnel available to work with the principal, it is not surprising that these kinds of innovations would be prevalent. "Innovation type is also terribly important because innovations have to fit the function of the territory (Daft & Becker, 1978:172)."

It is also possible that these more singular innovations were nurtured by the organizational structure and the staff autonomy present and that, conversely, these institutional features mitigated against more system-wide changes. Indeed one intriguing finding from the Abt studies of the Rural Experimental Schools (RES) program was that high levels of autonomy were negatively related to comprehensive change and that bureaucratic type structures were supportive of them (Rosenblum and Louis, 1981:258). The time, energy, persistence, and know-how necessary to implement the competencies and the staffings, point to the reality of schools possessing these autonomy features being hesitant to take on other large-scale changes innovations such as those promoted by the RES program (e.g., career education, personalized education, diagnostic instruction).

6. In sum, it should be pointed out that these observations about principal behavior are not inconsistent with the previous discussion about teacher autonomy and staff initiative; principal intervention, in other words, can occur in a multitude of modes that may often appear to be unconnected to organizational change. A key point here is whether the administrator, when intervening in such ways, see his/her actions as closely or remotely linked to matters of curriculum and instruction.

Some nagging questions emerge from this brief analysis. Is it true as some researchers assert (Fullan, 1982:59; Rosenblum & Louis, 1981:16), that "simple" changes like these at Ten Above and Ten Below do not make much of a difference in the quality of education offered? Considering the general resource limitations of rural schools, are they, therefore, programmed for small-scale versus large-scale change with the result that superior education can rarely be offered in those settings? This "impact" issue is extremely difficult to address in the context of these voluntary changes because the root question, "Toward what end?" was rarely raised publicly in these organizations. Consequently, to what degree do these innovations represent progress on the road to educational excellence?

Stages of Concern (from interviews)

Figure 4

STAGES OF CONCERN:

TYPICAL EXPRESSIONS OF CONCERN ABOUT THE INNOVATION

	STAGES OF CONCERN	EXPRESSIONS OF CONCERN
IMPACT	6 REFOCUSING	I HAVE SOME IDEAS ABOUT SOMETHING THAT WOULD WORK EVEN BETTER.
	5 COLLABORATION	I AM CONCERNED ABOUT RELATING WHAT I AM DOING WITH WHAT OTHER INSTRUCTORS ARE DOING.
	4 CONSEQUENCE	HOW IS MY USE AFFECTING KIDS?
TASK	3 MANAGEMENT	I SEEM TO BE SPENDING ALL MY TIME IN GETTING MATERIAL READY.
	2 PERSONAL	HOW WILL USING IT AFFECT ME?
SELF	1 INFORMATIONAL	I WOULD LIKE TO KNOW MORE ABOUT IT.
	0 AWARENESS	I AM NOT CONCERNED ABOUT IT (THE INNOVATION).

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The results of the Open Ended Statements of Concern interview are depicted in Tables 11 and 12.

Table 11

TEN ABOVE
N = 29

Types of Voluntary Innovations ↓	STAGES OF CONCERN: Stage 0 Awareness	Stage 1 Informational	Stage 2 Personal	Stage 3 Management	Stage 4 Consequence	Stage 5 Collaboration	Stage 6 Refocusing
Course				4	7		
Unit					5		
Theme				1	1		
Methods & Materials				2	2		
Imposed Innovation ↓ Basic Competencies				4	3		

Table 12

TEN BELOW
N = 24

Types of Voluntary Innovations	STAGES OF CONCERN: Stage 0 Awareness	Stage 1 Informational	Stage 2 Personal	Stage 3 Management	Stage 4 Consequence	Stage 5 Collaboration	Stage 6 Refocusing
Course					10	1	
Unit					4		
Theme							
Methods & Materials					1		
Technology							
Imposed Innovation ↓ Basic Competencies				6	2		

Observations

Although the total SoC score from the Open Ended Statements of Concern interview is not as useful a measure of concerns as is the individualized analysis of Stages of Concern through a developmental "concerns profile," it has proven to be helpful in assessing concerns (Newlove & Hall, 1976:2), in this case at a moment in time, the fall of 1981.

1. The relatively veteran faculty who were the population studied, did not have concerns about the nature of the innovation itself. Rather some were having intense feelings about the management of the change, (i.e., handling of time, materials, or other logistical matters.) Examples of Stage 3 concerns are:
   a. two teachers were trying to find ways to coordinate use of a new text.
   b. a teacher responsible for implementing Basic Competencies felt that "I didn't go into secondary education to teach elementary school material. All I seem to do is file stuff."
   c. a teacher teaching a new course with a group of low achievers, was having strong feelings about how to organize and deliver the content so as not to "bore the kids," have them lose interest, and consequently result in discipline problems.
   d. a teacher of science was trying to find ways to bring more guest speakers to class, to get students out on field trips to apply course learnings, and to manage these activities with "less hassle."
2. Other staff were concerned with the impact of their work on the student. Research on the concerns concept indicates that, in general, as people gain experience and knowledge and skill, they move in development toward impact level stages (Hall, George, and Rutherford, 1979:6). Examples

of Stage 4 concerns are:

a. a science teacher who was integrating "current issue" type material into her class (e.g., genetic counseling, euthanasia, holistic health) said that "Kids in a rural area need to be made aware of controversial issues."

b. a teacher of a new social studies unit asked, "Of what benefit will this material be to this advanced group?"

c. a teacher in industrial arts was wondering how he'd stimulate and sustain student interest in new material because "Their interest controls the whole thing. The more they're into it the better it works for them."

d. a teacher implementing Basic Competencies was concerned that the competencies didn't stifle her creativity with students by subtlely becoming the central focus of a course.

3. Given the individualistic, single classroom nature of the teaching profession, it is not surprising to see only one teacher at Stage 5, collaboration, and none at the refocusing level. As Fullan (1982:119) has pointed out, cultural conditions and practicality concerns mitigate against teachers taking the initiative to promote change beyond their classroom.

4. The concerns surfaced through these Open Ended Statements of Concern interviews show clearly that the subjective dimension of teaching, its phenomenology, is critical to understand before an administrator engages in efforts to change "what is" (Fullan, 1982:120). The notion that change is a very personal experience for each person involved in it underlies the CBAM model. CBAM stresses that "...it is the person's perceptions that stimulate concerns, not necessarily the reality of the

the situation (Hall, George, & Rutherford, 1979:5). And, as Hall and Loucks caution, the concerns that administrators or staff developers have may not be the same as those of teachers, and within any group, even one involved with the same innovation, there will be a variety of concerns (1978:53). Implementation, then, can flounder on the rock of erroneous assumptions about concerns.

Stages of Concern (from questionnaire)

As mentioned in an earlier section, only two "imposed" innovations were identified in each school that in turn affected, in theory, the whole organization. These were Vermont Basic Competencies and PL 94-142 staffings, both of which allowed considerable room for local adaptation. Here use of the Stages of Concern questionnaire, a 35-item validated instrument, was appropriate in order to elicit further understandings about implementation. To reiterate an earlier limitation, however, the instrument was applied just once rather than several times over at least a few months period. Hence the data that follow are not developmental.

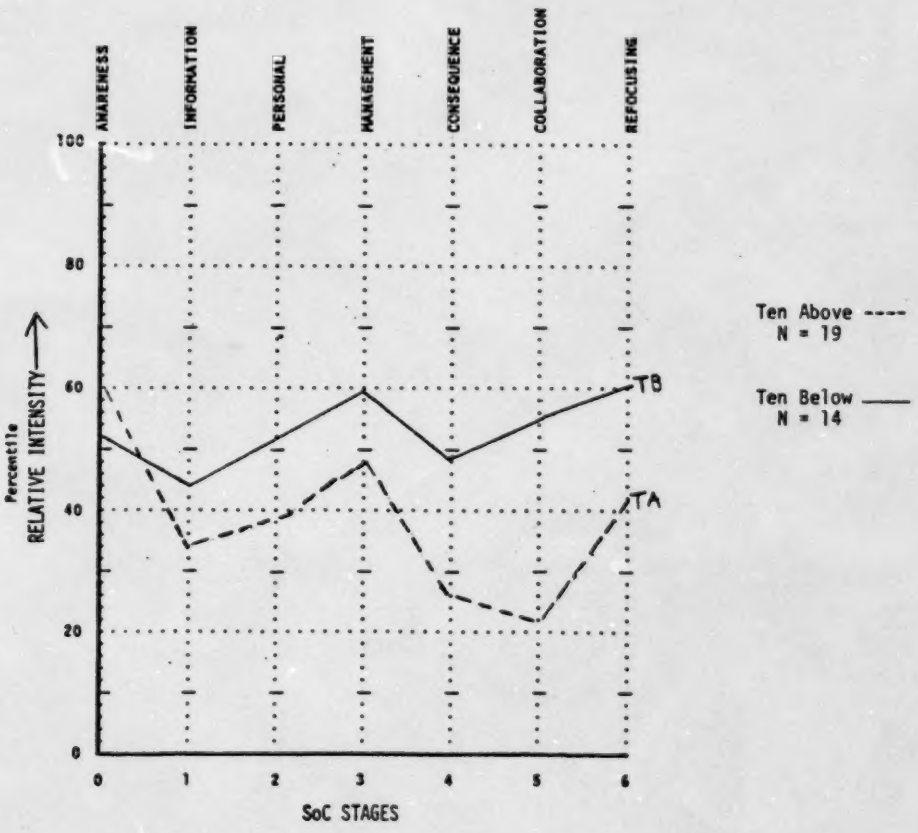
In both schools the English, mathematics, social studies, and science departments were responsible for implementing the competencies which involved the teaching and testing of the material and the monitoring of the system. Other departments were not involved directly with this innovation. It was a different matter with 94-142, which in theory could affect every staff member, depending on whether they had some responsibility for a youngster who was eligible for special education services. In reality, due to their assignment, (e.g., basic math or English vs. calculus or French) some teachers had considerable contact with these students because they were enrolled in class and consequently had weekly high (3 to 4), moderate (1 to 2), or no contact with these students during peak staffing times (usually the fall and spring).* Due to space limitations, what will be described

*Under the law the only people required to participate in a staffing are the special educator, a teacher who has the student in class, and one other person, usually a counselor. Ten Above and Ten Below had participation expectations that required that other staff plus the parents be involved in staffings. What needs to be pointed out is that rarely did a parent attend, despite extensive efforts on the part of the special educator, counselor, and principal to get them to do so.

next are group data (see Figures 5 & 6) relating only to the teachers responsible for implementing competencies and staff highly involved with staffings. Far more clinical type diagnosis could be done with individual SoC profiles, but this study has focused on the group level.

Figure 5

The Concerns of Ten Above and Ten Below Teachers of English, Math, Science, and Social Studies About Implementing Basic Competencies.

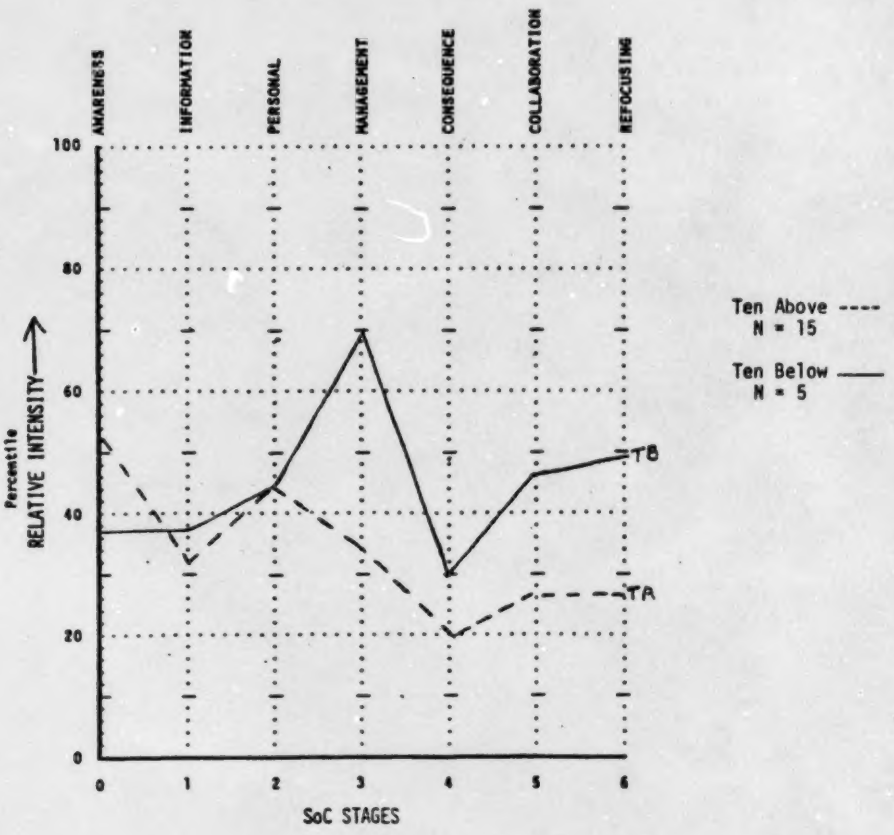


0	1	2	3	4	5	6	
60	34	39	47	27	22	42	Ten Above
53	43	52	60	48	55	60	Ten Below
7	9	13	13	21	33	18	Difference

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL R&D CENTER FOR TEACHER EDUCATION. THE UNIVERSITY OF TEXAS AT AUSTIN.

Figure 6

The Concerns of Ten Above and Ten Below Staff Highly Involved in P.L. 94-142 Staffings.



0	1	2	3	4	5	6	
53	30	45	34	19	25	26	Ten Above
37	37	45	69	30	44	47	Ten Below
16	7	0	35	11	19	21	Difference

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL R&D CENTER FOR TEACHER EDUCATION. THE UNIVERSITY OF TEXAS AT AUSTIN.

Observations

1. It is important to stress the fact that higher or lower concerns are not synonomous with "good or bad" feelings. What the scores indicate is the intensity of concerns at a moment in time for an individual experiencing change, the higher the score the stronger the feelings, thoughts, or considerations and conversely

with a lower score.* Higher and lower are not absolute but relative to other stage scores for that person. And what may be a high percentile of intensity for one person may be the lowest concern for another (Hall, George, and Rutherford, 1979:31).

2. Basic Competencies

The following factors, drawn from interviews, documents, and limited observation are offered as reasons for the differences in the SoC profiles.

Ten Above (N = 19)	Ten Below (N = 14)
- a three page, detailed set of instructions on managing the competencies was available to staff including how to record pupil progress.	- a one page, less detailed set of instructions was available which did not address items such as record keeping.
- each dept. responsible for competency implementation had at least one teacher (some had two) assigned to a Competency Class in place of a regular class assignment. Hence using this period in combination with one's regular unassigned period a teacher was able to take youngsters out of study hall who were in need of more help with BC s. Teachers felt that they were able to contact "90%" of kids in need of assistance.	- The English and math depts. had a teacher assigned to a "lab" in place of a regular class assignment. This period was used similarly to what was done at Ten Above. Teachers felt that there were still "many" kids that they were not able to assist.
- Competency tests were in place in all depts. responsible for BCs, and were being used with results recorded. The principal used these results to follow up on problem students and to identify weak spots in the BC system.	- Tests were in place in English, math, and social studies, and were being used with results recorded. The principal used these results similarly to the Ten Above principal.
- Each dept. was required to keep a BC file on each student for whom it had responsibility which was used in combination with a once a year computer print-out. A typical teacher comment on the files was, "I trust them more than the print-out as I know they are my entrees." These were kept up-to-date and monitored periodically by the principal, who also monitored the system through print-out data.	- File folders were kept on a voluntary basis by the English, math, and social studies depts. Computer print-outs were provided quarterly. The principal monitored the system through the print-outs.

*According to CBAM staff, a difference of at least ten percentile points is an important difference in terms of concerns.

3. Staffings*

Ten Above (N = 15)	Ten Below (N = 5)
- Four pages of detailed instructions on placement procedures, staffing procedures, and staffing protocol were available to staff.	- No written instructions were available to staff.
- The written material made it clear that any staff member identified as "regularly in contact" with the student was required to attend. Anyone not attending, "... will be so noted on the record."	- "Required attendance" was stated verbally and in writing by the principal and the Resource Room teacher.
- Staffings were held before school, were limited strictly to 30 minutes, and were taped. People attending arrived on time and did not leave early.	- Staffings were held after school, often started late, and often ran over the set time frame. People attending sometimes arrived late and left early.
- The principal regularly chaired staffings. Of 106 staffings between 1/28/80 and 10/15/81 he chaired 103. He once stated, "I take a trip everytime we have a staffing. It is the one place where professionalism really comes through day after day."	- The principal only attended when requested by the Resource Room teacher.
- At least five days before a staffing, the Resource Room teacher notified on paper those people who were to attend. This notice instructed these individuals to come prepared to discuss the strengths and weaknesses of the student and tentative recommendations.	- At least five days before a staffing, the Resource Room Teacher notified on paper those people who were to attend.

*The difference in the N's of teachers highly involved in staffings was due to:

a. at Ten Above, although 94-142 requires only one staffing every three years on an eligible student, they were held every year and any teacher who had that individual in class was required to be present. Therefore, many teachers in grades 9-12 were involved. There were also numerous requests for staffings from teachers.

b. At Ten Below, because students were coming right from the three feeder elementary schools into the 7th grade, the focus of staffings in the fall of '81 was on junior high kids. Therefore, only a small N of teachers were highly involved.

3. Staffings (continued)

- The Resource Room teacher was beginning to observe eligible students in regular classrooms on a systematic basis.
- The Resource Room teacher was starting her third year full-time on the job.
- There was no systematic observation of eligible students in regular classrooms.
- The Resource Room teacher was starting her first year full-time on the job.

4. There are several reasons for the differences in how these imposed innovations were implemented. One is a set of logistical factors (e.g., bus arrival and school starting time) that affected implementation. A second is the human factor of what personnel are available at a particular moment in organization history who can assume responsibility for a school-wide change effort. (e.g., a veteran vs. less experienced staff member). Another revolves around the administrative and educational philosophies of the principals as reflected by: (1) the degree to which professionals need specificity in directions and monitoring when implementing an imposed innovation; (2) the degree to which an administrator should intervene in a change situation; (3) the degree to which an administrator could (or was inclined) to allocate personal time to these kinds of needs; and (4) the degree to which innovations like these were seen as integral rather than adjunct to existing programs.

5. Throughout this subprocess of implementation, one can see the thread of influence of administrators. A dilemma for them was how much to intervene with staff in some dimension of implementation. "The psychological and sociological problems of change which confront the principal are at least as great as those that confront the teachers (Fullan, 1982:71)."

Institutionalization

"Stabilizing a Change in State"

The essence of institutionalization is the decision to continue what has been started, to establish new routines built around what has been implemented. According to Berman (in Lehming and Kane, 1981; 270) this subprocess has received "scant attention" in education or in other fields. The three pages devoted to the subject

in the latest comprehensive volume on change (Fullan, 1982; 76-78), attests to this conclusion.

As we have seen, within the last five years, other than the Basic Competencies and staffings, there were no school-wide imposed innovations at Ten Above or Ten Below that required a "continue" or "discontinue" decision. Therefore, this section will focus on voluntary innovations, the vast majority of which revolved around individual teachers or individuals affiliated with colleagues in a department arrangement.

Continuation

Other than the ten year self evaluation conducted in preparation for a visit by a regional accreditation team, neither school had developed a systematic means by which to decide what aspects of curriculum and instruction to retain. As was discussed earlier regarding mobilization, school philosophy and goals were not apparent as reference points for decision-making for that subprocess and neither did they play a publicly articulated role in institutionalization. Rather the "choice opportunities" (March and Olsen, 1979:27) that presented themselves popped up at sundry times and decisions were made accordingly. As we shall see, decisions revolved primarily around when something should be considered for discontinuation. When one considers the "busy" environment of schools, the sheer volume of human interaction that occurs, and the fatiguing pace of work (Pellegrin in Dubin, 1976:353-355) it is understandable that there is minimal energy left to engage in discussions about continuation. What energy is available is allocated to what rises to the top of the pile of problems and choice opportunities, and "what" rises is very dependent on

> ... a relatively complicated intermeshing of the mix of choices available at any one time, the mix of problems that have access to the organization, the mix of solutions looking for problems, and the outside demands on the decision-makers. (March and Olsen, 1979:36).

Discontinuation

Table 13 summarizes curricular or instructional innovations discontinued within the last five years (as best determined by the available data).

Table 13

Innovations Dropped

	Ten Above	Ten Below
Courses	26	23
Units	2	

Table 14 lists the reasons given by school personnel for dropping what was once viewed as an innovation.

Table 14

Reasons for Dropping a Curricular or Instructional Innovation*

N = 67

- Material too difficult for students	3
- Enrollment decline	2
- Loss of staff	2
- Lack of student interest	2
- Boring material, couldn't get speakers, cost of film rentals	2
- Students procrastinated on doing work	2
- Community reaction to kids out in town during the day	1
- No time to do justice to material	1
- Material covered in another class	1

*51 interviewees could not identify an innovation dropped within the last five years.

Observations

1. In a high school dropped courses can be tracked by examining programs of study. Technological innovations dropped can usually be observed. Virtually impossible to track are changes such as units of study, themes, or methods and materials.

Hence memory, which we know is far from reliable, becomes the key retrieval mechanism. Considering the sheer number of innovations identified in each organization, it seems reasonable to conclude that over five years more things were dropped than could be remembered in order to make room for the new, or a lot of curriculum and instructional adaptation took place to absorb the "add ons."

2. More courses were dropped (49) than were added (28). A great deal of this change can be attributed to the elimination of electives in English and Social Studies which had become quite popular in the early 70s. By the middle of the decade the "Back to Basics" movement had begun, and these fields were early targets of criticism for allowing too much student choice and thus permitting many kids to avoid taking more "rigorous" courses. The locus of these changes was within subsystems of the schools and keyed off of "discontent" phenomena linked vaguely to organizational philosophy and goals. This subsystem route illustrates one advantage of a loosely coupled structure which is to enable change to occur in one part of the organization in response to environmental pressures while other parts can remain stable (Weick, 1982:674).

3. At Ten Above and Ten Below course level changes did not occur on a matching or one to one basis. In many instances a dropped course was merged in some way with an existing or new course (e.g., Introduction to Physical Science, required of all 9th graders, became basic chemistry, physics, and biology electives, American Government content absorbed partially into Introduction to Social Studies and partially into U.S. History). Such processes enabled many discontinuation decisions to be made relatively easily within the organization by educators.

4. The list of "reasons for dropping an innovation" illustrates again that a rationalistic process of goal setting, needs assessment, program development, program implementation, and evaluation was not operational in these schools. It is also interesting that financial factors and staff turnover, the two main reasons

given in the literature for discontinuation (Fullan, 1982:76-77), were not predominant at Ten Above and Ten Below. The literature focuses on schools that received federal project money and when the "soft" money was gone the LEA did not pick up the difference. At Ten Above and Ten Below such money was scarce, and within the last five years there had been minimal staff turnover.

5. Previous data indicates that a major reason for the continuation of most innovations at Ten Above and Ten Below was the fact that the vast majority had been adopted or developed by teachers rather than having been imposed (see Table 2, p.6). Also, the ones implemented had been stimulated mainly by the very personalized forces of student attitudes, behavior, or need (see Table 3, p.9). Hence there was a psychological investment in the voluntary innovations that served as a strong underpinning for their institutionalization. The decided absence of opportunistic reasons for change in these schools (i.e., to secure grant monies or to placate a community group) (Berman & McLaughlin, 1978:14), is telling in relationship to the innovations in use.

6. During the subprocess of institutionalization, the most visible impact of the principals was on decisions to retain or drop courses. As was mentioned in the section on mobilization (see p. 7), identifying the less obvious innovations (e.g., teaching methods or styles) where the principals had a definite effect was quite difficult. The same conclusion holds for non-course innovations. Given the roles these men played in their organizations plus the ways in which they were viewed by most of their faculties (see p.18), it seems safe to assume that they were "causal" factors in a high percentage of instances where institutionalization occurred.

Conclusions

This project has resulted in many findings that illustrate the utility of applying the framework of mobilization, implementation, and institutionalization to studying processes of curricular and instructional change. Most of the innovations identified by the research supported the assertions underlying these subprocesses of change, namely that change is rarely a linear movement from one discrete stage to another but instead is usually an intricate, ongoing series of actions and activities. The findings also demonstrate that the emerging concepts in the organizational literature of "garbage can" processes and "loosely coupled" structures are very related to these subprocesses.

The Concerns Based Adoption Model proved to be an effective vehicle through which to gain further understanding of the dynamics of change and innovation associated with mobilization, implementation, and institutionalization. Most of the assumptions underlying the Model were supported by the data. Change at Ten Above and Ten Below was primarily a process rather than an event; change was made primarily by individuals first and then their institutions; change was a highly personal experience.

Teachers emerged from the research as critical actors in the adoption or development of voluntary innovations and in their subsequent implementation and continuation. Change in these schools was very much from the "bottom up" but principals played important roles throughout all three subprocesses, sometimes by being quite proactive in initiating innovation and sometimes by just being supportive and helpful to staff. They were active and assertive people who placed curricular and instructional improvement high on their list of priorities. They choose an administrative style that put them squarely in the mainstream of educationally related activities.

The project portrayed the reality that change and innovation occur within a complex social system where relationships between educators, students, and laypeople and functions such as budgeting, scheduling, and supervision are often

confounding factors to effecting school improvement. Failure to consider these factors and to work with them virtually assures that little voluntary innovation will take place.

Other than two imposed innovations, Basic Competencies and staffings, the bulk of innovations at Ten Above and Ten Below were initiated from within the organizations. There appeared to be little external pressure on them to change. Ruralness in itself did not emerge as a major factor aiding or impeding change. Because this question was pursued only relatively briefly with administrators and staff (the community and students were not studied formally), it is possible that more subtle aspects of ruralness were at work than "met the eye." It is also conceivable that regional high schools like Ten Above and Ten Below are more "distanced" from their constituencies and local environmental forces than are single community high and elementary schools and thus are less vulnerable to external pressures. Whatever the explanation, considerable change had occurred in these schools over a five year period and their current characteristics are a strong indication that they possess the means, inclination, and will to continue to improve the quality of education delivered to the youth they serve. The evidence is clear, however, that such improvement will be incremental rather than radical in flavor; reform rather than revolution will prevail.

"It is frustrating to close on a note of irresolution, of ignorance about probable futures. Yet one thing seems likely: social institutions, like high schools, have changed slowly; in the next generation, they are likely to be more similar to the way they were in the previous generation than they are likely to be different. I say this in neither comfort nor despair but merely in recognition. In truth, fish do not fly, birds do not bark, and dogs do not sing; at least, not in our time." (Ducharme, 1981:29).

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